# BILLING CODE 6450-01-P

### **DEPARTMENT OF ENERGY**

Proposed Subsequent Arrangement

**AGENCY**: Office of Nonproliferation and International Security, Department of Energy.

**ACTION**: Proposed Subsequent Arrangement.

**SUMMARY**: The Department is providing notice of a proposed agreement between the Government of the United States of America and the Government of the Republic of Korea that is being processed as a subsequent arrangement.

FIFTEEN DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

FOR FURTHER INFORMATION CONTACT: Mr. Sean Oehlbert, Office of
Nonproliferation and International Security, National Nuclear Security Administration,
Department of Energy. Telephone: 202-586-3806 or e-mail: Sean.Oehlbert@nnsa.doe.gov.

SUPPLEMENTARY INFORMATION: The agreement being processed as a subsequent arrangement is the proposed Agreement between the Government of the United States of
America and the Government of the Republic of Korea Relating to the Transfer of Certain
Nuclear Technologies in the Course of the Joint Fuel Cycle Study (the Agreement) being conducted by authorized technical experts from the United States of America and the Republic of
Korea (ROK). The Joint Fuel Cycle Study (JFCS) will explore the technical and economic feasibility and the nonproliferation acceptability of the electrochemical recycling process and of other spent fuel management options. The purpose of the Agreement is to establish legal

procedures and controls governing the transfer of technologies under the course of the JFCS that are necessary for its successful completion.

The U. S. Government has concluded that electrochemical recycling technology as defined in the Agreement is sensitive nuclear technology (SNT) within the meaning of Section 4(a)(5) of the Nuclear Non-Proliferation Act of 1978 (22 USC 3203(a)(5)), and that the transfer of such technology to the ROK is necessary for the successful completion of the JFCS. Sections 127 and 128 of the Atomic Energy Act of 1954, as amended (AEA), impose certain requirements on the export of SNT. In order to meet those requirements and proceed with the transfer of SNT as part of this cooperation, the U.S. Government must obtain the ROK government's agreement to conditions on the transferred SNT and any nuclear material or equipment produced through its use. The Agreement was explicitly developed to meet the requirements of AEA Sections 127 and 128 regarding the transfer of SNT to the ROK and contains all the terms and conditions required therein.

The Agreement would impose reciprocal obligations on both the U.S. Government and the ROK government regarding all technology transferred under the Agreement, including SNT, except insofar as the Agreement reflects the different obligations of the two governments under their respective safeguards agreements with the International Atomic Energy Agency (IAEA).

Although the Agreement would not be concluded pursuant to an agreement for nuclear cooperation entered into pursuant to Section 123 of the AEA, the results of the collaboration

eventually may be applicable to spent nuclear fuel in the ROK that is subject to the Agreement

for Cooperation Between the Government of the United States of America and the Government

of the Republic of Korea Concerning Civil Uses of Atomic Energy, signed at Washington

November 24, 1972, as amended, or a successor agreement. Moreover, as noted above, the U.S.

Government considers electrochemical recycling technology, as defined in the Agreement, to be

SNT under U.S. law, as it constitutes information not available to the public that is important to

the design, construction, fabrication, operation or maintenance of a nuclear fuel reprocessing

facility. Taking these factors into account, the Department of Energy and the Department of

State have concluded that it would be appropriate to follow the consultation and review

procedures in AEA Section 131a. concerning subsequent arrangements prior to entering into the

Agreement and for the Department of State to prepare a Nuclear Proliferation Assessment

Statement.

As provided in Section 131a. of the Atomic Energy Act of 1954, as amended, I have determined

that this subsequent arrangement will not be inimical to the common defense and security. In

reaching this determination, all relevant factors were considered, including the Nuclear

Proliferation Assessment Statement provided by the Department of State.

DATED: May 14, 2013

Daniel B. Poneman,

Acting Secretary of Energy

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AGREEMENT BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA
AND THE GOVERNMENT OF THE REPUBLIC OF KOREA RELATING TO THE
TRANSFER OF CERTAIN NUCLEAR TECHNOLOGIES IN THE COURSE OF THE JOINT
FUEL CYCLE STUDY

The Department of State refers the Embassy of the Republic of Korea to the collaboration between the Government of the United States of America (United States) and the Government of the Republic of Korea (ROK) considering the technical, economic, and nonproliferation aspects of spent fuel management technologies in the course of the Joint Fuel Cycle Study undertaken by our two governments beginning in April 2011 (such collaboration being hereinafter referred to as the "Collaboration"). The Department of State proposes the following agreement (the "Agreement") with respect to the transfer of the technologies described in Section I (2) below between the United States and the ROK in connection with the Collaboration:

- I. For purposes of this Agreement, the following terms shall have the following meanings:
  - "Parties" shall mean the Government of the United States of America and the Government of the Republic of Korea.
  - 2. "Technologies" (hereinafter referred to in whole or in part in this Agreement as the "technologies") shall mean the following:
    - (a) Electrochemical recycling technology; and

- (b) Any other technology that the Parties agree in writing to make subject to the provisions of this Agreement in connection with the Collaboration.
- The term "technologies" does not include information that is in the public domain.

  Technologies may be in tangible form (such as a model, prototype, blueprint, operation manual, electronically stored data), or intangible form (such as technical services), and shall include information or data incorporated in equipment.
- 3. "Electrochemical recycling technology" shall mean all information on research, development, and design of all process steps and major critical components of electrochemical recycling (also known as pyroprocessing). For purposes of this Agreement, electrochemical recycling technology shall not include information on the pretreatment and oxide to metal electro-reduction steps in which transuranics are not capable of being separated.
- 4. "Transferred Technologies" shall mean any technologies (as defined in Section I (2) above) transferred between the Parties in accordance with Section IV of this Agreement in the course of the Collaboration at any time after entry into force of this Agreement, and shall include both the technologies as originally transferred and the technologies as modified or melded with other technology either through joint collaboration between the United States and the ROK or by either the United States or the Republic of Korea without participation of the other. Transfers of and cooperation on technologies subject to this Agreement may be undertaken directly between the Parties or through their Executive Agents or through authorized Persons, and may be accomplished through various means, including reports, data banks, computer programs, meetings, visits, and

- assignments of staff to facilities. Transfers of any technologies made in accordance with Section IV of this Agreement by one Party to individuals, wherever located, who are authorized by the other Party to receive information in the course of the Collaboration shall be deemed to be transfers to the authorizing country for purposes of this Agreement.
- 5. "Equipment" shall mean any installation, facility, system, device, substance or any other item other than nuclear material (including an especially designed component of any of the foregoing) that either Party has determined to be capable of making use of special nuclear material or of significance for nuclear explosive purposes.
- 6. "Nuclear material" shall mean (a) "source material," namely, uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate; any other substance containing one or more of the foregoing in such concentration as may be agreed to by the Parties; and (b) "special nuclear material," namely, plutonium, uranium 233, uranium enriched in the isotope 233 or 235; any substance containing one or more of the foregoing; and such other substance as may be agreed to by the Parties.
- 7. "Produce," when used in relation to special nuclear material, shall mean (a) to manufacture, make, produce, or refine special nuclear material; (b) to separate special nuclear material from other substances in which such material may be contained; or (c) to make or to produce new special nuclear material.
- 8. "Executive Agents" shall mean the Department of Energy for the United States and the Ministry of Education, Science and Technology for the Republic of Korea.

- 9. "Information in the public domain" shall mean information that has been made available without restrictions on its further dissemination. Copyright restrictions do not remove information from being in the public domain.
- 10. "Person" shall mean any individual or any entity subject to the jurisdiction of either Party but does not include the Parties to this Agreement.
- II. The Parties agree to the following requirements, provided that these requirements shall not apply to a Party with respect to specific technologies developed solely by that Party and transferred by it to the other Party.
  - 1. Safeguards.
    - (a) International Atomic Energy Agency (IAEA) safeguards as required by Article III (2) of the Treaty on the Non-Proliferation of Nuclear Weapons done at Washington,
      London, and Moscow on July 1, 1968 (NPT) shall be applied to any nuclear material within the territory or under the jurisdiction or control anywhere of the ROK used in or produced by or through the use of Transferred Technologies, including, but not limited to, nuclear material used in or produced by or through the use of equipment produced or constructed by or through the use of Transferred Technologies.
    - (b) IAEA safeguards shall be maintained with respect to all peaceful nuclear activities in, under the jurisdiction of, or carried out under the control anywhere of the ROK.
    - (c) Implementation of the Agreement between the Government of the Republic of Korea and the International Atomic Energy Agency for the application of safeguards in connection with the NPT, signed on October 31, 1975, which entered into force on

- November 14, 1975, and the Additional Protocol thereto, which entered into force on February 19, 2004, shall be considered to fulfill the requirements in paragraphs (a) and (b) of this Section II (1).
- (d) Any nuclear material within the territory or under the jurisdiction or control anywhere of the United States of America used in or produced by or through the use of Transferred Technologies, including, but not limited to, nuclear material used in or produced by or through the use of equipment produced or constructed by or through the use of Transferred Technologies, shall be subject to the agreement between the United States of America and the IAEA for the application of safeguards in the United States of America, signed on November 18, 1977, and entered into force on December 9, 1980, and the Additional Protocol thereto, which entered into force on January 6, 2009.
- (e) In the event that the IAEA safeguards agreement referred to in paragraph (c) of this Section II (1) is not being applied, the ROK shall enter into an agreement with the IAEA for the application of safeguards which provides for effectiveness and coverage equivalent to that provided by the safeguards agreement required by paragraph (c) or, if that is not possible, the Parties shall immediately establish safeguards arrangements for the application of safeguards which provide for effectiveness and coverage equivalent to that provided by the safeguards agreement required by paragraph (c).
- (f) In the event that the IAEA safeguards agreement referred to in paragraph (d) of this Section II (1) is not being applied, the United States shall enter into an agreement with the IAEA for the application of safeguards which provides for effectiveness and

coverage equivalent to that provided by the safeguards agreement required by paragraph (d), or if that is not possible, the Parties shall immediately establish safeguards arrangements for the application of safeguards which provide for effectiveness and coverage equivalent to that provided by the safeguards agreement required by paragraph (d).

### 2. Peaceful Use.

Transferred Technologies, any nuclear material or equipment produced or constructed under the jurisdiction or control of either the United States or the ROK by or through the use of Transferred Technologies, including, but not limited to, nuclear material used in or produced through the use of equipment produced or constructed by or through the use of Transferred Technologies, shall not be used for any nuclear explosive device or for research on or development of any nuclear explosive device or for any other military purpose.

## 3. Physical Protection.

- (a) All necessary measures shall be maintained to ensure adequate protection of Transferred Technologies against loss, theft, or unauthorized access.
- (b) Adequate physical protection shall be maintained with respect to any nuclear material and equipment produced or constructed by or through the use of Transferred Technologies, including, but not limited to, nuclear material used in or produced through the use of equipment produced or constructed by or through the use of Transferred Technologies. To fulfill this requirement, such physical protection measures shall provide levels of protection at least equivalent to (i) the

recommendations published in the IAEA document INFCIRC/225/Rev.4, "The Physical Protection of Nuclear Material and Nuclear Facilities," and in any subsequent revision thereto accepted by both Parties, and (ii) the provisions of the Convention on the Physical Protection of Nuclear Material, adopted at Vienna October 26, 1979, and any amendments to the Convention that enter into force for both Parties.

### 4. Retransfer.

Transferred Technologies, and nuclear material and equipment produced or constructed under the jurisdiction or control of the recipient Party by or through the use of Transferred Technologies, including, but not limited to, nuclear material used in or produced through the use of equipment produced or constructed by or through the use of Transferred Technologies, shall not be transferred to unauthorized Persons or beyond the territory, jurisdiction or control of either the United States or the ROK (except to each other) unless the Parties agree, and unless the proposed recipient nation or nations provide assurances to the Parties that the proposed retransfer of technologies shall be subject to conditions equivalent to those set forth in Sections I-II, V, and X of this Agreement with respect to the transfer of the technologies.

- 5. Reprocessing and Other Alteration in Form or Content.
  - (a) In light of the fact that this Agreement covers transfers of technologies for research and development, Transferred Technologies, and any equipment produced or constructed under the jurisdiction or control of either Party by or through the use of Transferred Technologies, shall be used solely for research and development

purposes, and shall not be used to reprocess or otherwise alter in form or content any irradiated nuclear material within the territory or under the jurisdiction or control of either Party, unless the Parties agree. The Parties note that continuation of the research and development envisioned by the Collaboration may at some time in the future involve alteration in form or content of nuclear material. The Parties agree, therefore, to review at an appropriate time the issue of consent to alteration in form or content to support continued research and development in the Collaboration, and recognize that granting any such consent will be subject to compliance with any necessary domestic legal requirements of the Party granting the consent.

- (b) No nuclear material produced by or through the use of Transferred Technologies, including, but not limited to, nuclear material used in or produced through the use of equipment produced or constructed by or through the use of Transferred Technologies, shall be reprocessed, and no irradiated fuel elements containing such material removed from a reactor shall be altered in form or content, except by irradiation or further irradiation, unless the Parties agree.
- (c) The requirements set forth in paragraphs (a) and (b) of this Section II (5) for agreement of the Parties in order for the activities described therein to take place shall be deemed satisfied with respect to a particular facility if the Parties agree, in a separate agreement between them, on reprocessing or alteration in form or content of nuclear material in that facility.
- III. By written notice to the other Party, each Party may add additional Executive Agents or

change its Executive Agent(s).

- IV. Prior to transfer of any technologies intended to be subject to this Agreement, the transferring Party, through its Executive Agent, shall notify the other Party, through its Executive Agent, in writing of the proposed transfer, together with a summary description of the specific technologies to be transferred. Technologies proposed to be transferred from one Party to the other in the course of the Collaboration shall not be subject to this Agreement unless the recipient Party, through its Executive Agent, notifies the transferring Party in writing, through its Executive Agent, prior to the transfer, that it consents to receive the specific technologies and confirms that the Transferred Technologies, upon receipt, shall be subject to the terms and conditions set forth herein. Either Party shall have the right not to accept a proposed transfer of technologies under this Agreement.
- V. Each Party shall maintain an inventory of the technologies transferred to the other Party pursuant to the Collaboration, and shall provide an annual report to the other Party of the technologies transferred to the other Party pursuant to the Collaboration. Each Party shall provide an annual report to the other Party of all Transferred Technologies it holds pursuant to the Collaboration (including, but not limited to, technologies modified or melded with other technology by the recipient Party through the use of Transferred Technologies), of all its nuclear material and equipment produced or constructed through the use of Transferred Technologies, and of all its nuclear material used in or produced through the use of equipment produced or

constructed by or through the use of Transferred Technologies. The Executive Agents may establish arrangements for the notification of transfers, the annual reports and inventories.

VI. If any question arises concerning the interpretation or application of this Agreement, the Parties shall, at the request of either of them, consult with each other. Any dispute between the Parties regarding interpretation or implementation of this Agreement shall be promptly negotiated by the Parties with a view to resolving that dispute, and may be addressed through diplomatic channels or any other peaceful means of settlement of disputes agreed to by the Parties.

VII. The terms of this Agreement shall be implemented in good faith and in a manner designed to avoid undue interference in the execution of the Joint Fuel Cycle Study, and with due regard to the long-term requirements of the nuclear energy programs in place in the United States and the Republic of Korea, in order to promote the peaceful uses of nuclear energy.

VIII. Except as otherwise provided in Section II (5) (c) of this Agreement, the provisions of this Agreement are in addition to and shall not supersede the provisions of the Agreement for Cooperation Between the Government of the Republic of Korea and the Government of the United States of America Concerning Civil Uses of Atomic Energy, signed on November 24, 1972, as amended on June 26, 1974, or any other agreement between the Parties establishing conditions relating to the transfer of nuclear material or equipment from the territory of one Party to the territory of the other Party, whether directly or through a third country.

- IX. This Agreement shall remain in force for a period of 20 years. This term may be extended for such additional periods as may be agreed in writing by the Parties. Either Party may terminate this Agreement before its expiration date by notifying the other in writing through diplomatic channels of its intention at least one (1) year prior to the intended date of such termination.
- X. Notwithstanding the termination or expiration of this Agreement, Sections I-II, V and X of this Agreement shall continue to apply so long as any Transferred Technologies or nuclear material or equipment subject to those Sections remains within the territory of the United States or the ROK, whichever is concerned, or under its jurisdiction or control anywhere, or until such time as the Parties agree:
  - 1. with respect to such nuclear material or equipment, that it is no longer usable for any nuclear activity relevant from the point of view of safeguards, or
  - 2. with respect to any of the Transferred Technologies, that such specific Transferred Technologies shall no longer be subject to this Agreement.

Within 60 days of a request by either Party at any time during the term of this Agreement or upon the expiration or termination of this Agreement or the Collaboration, the Parties shall commence consultations, which the Parties shall complete no later than 180 days from the request of either Party, to determine whether any specific technologies within the definition of Transferred Technologies under this Agreement can be removed from the coverage of this Agreement, and if the Parties so agree, the identified technologies shall no longer be subject to

this Agreement.

If these proposals are acceptable to the Government of the ROK, it is further proposed

that this Note, together with the Embassy's affirmative Note in reply on behalf of the

Government of the ROK, shall constitute an agreement between the two governments, which

shall enter into force on the date of the second note in a later exchange of notes between the two

governments indicating that each has completed its internal steps necessary for entry into force.

Department of State.

[FR Doc. 2013-12694 Filed 05/30/2013 at 8:45 am; Publication Date: 05/31/2013]

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